



Body Composition

Understanding the
relationship between body fat
and body composition

Body Composition

A faint background graphic featuring a light green silhouette of a person in a yoga pose (resembling a tree pose) centered within a light blue circular outline.

- Body Composition is the technical term used to describe the different components that, when taken together, make up a person's body weight.

Body tissues

The background features a light blue circular arrow pointing clockwise. Overlaid on this is a green silhouette of a human figure in a dynamic, athletic pose, possibly running or jumping.

- The human body is composed of a variety of different tissue types. The so-called 'lean' tissues, such as muscle, bone, and organs are metabolically active, while adipose, or fat tissue, is not.

Understanding body fat %

- **Body fat measurements and the measuring tape are recognized as superior methods for measuring "weight loss". When one declares that they want to "lose weight", what they often mean is that they want to lose *fat*. So, now that you've had your body fat percentage measured, what does the number really mean?**
- **First, your body fat percentage is simply the percentage of fat your body contains. If you are 150 pounds and 10% fat, it means that your body consists of 15 pounds fat and 135 pounds lean body mass (bone, muscle, organ tissue, blood and everything else).**
- **A certain amount of fat is essential to bodily functions. Fat regulates body temperature, cushions and insulates organs and tissues and is the main form of the body's energy storage. The following table describes body fat ranges and their associated categories:**

Classification	Women (% fat)	Men (% fat)
Essential Fat	10-12%	2-4%
Athletes	14-20%	6-13%
Fitness	21-24%	14-17%
Acceptable	25-31%	18-25%
Obese	32% plus	25% plus

What should my body fat be?

- A better question might be, "What is your ideal weight?"
- Body fat percent varies considerably for men and women, and age.
- However, there are some standards. The minimum percent body fat considered safe and acceptable for good health is 5% for males and 12% for females.
- The average adult body fat is closer to 15%-18% for men and 22%-25% for women.

How much is too much?

- Too much body fat can have some negative physiologic effects.
- Once men creep up over 25% and women over 32% fat, there is a dramatic correlation with illness and disease.

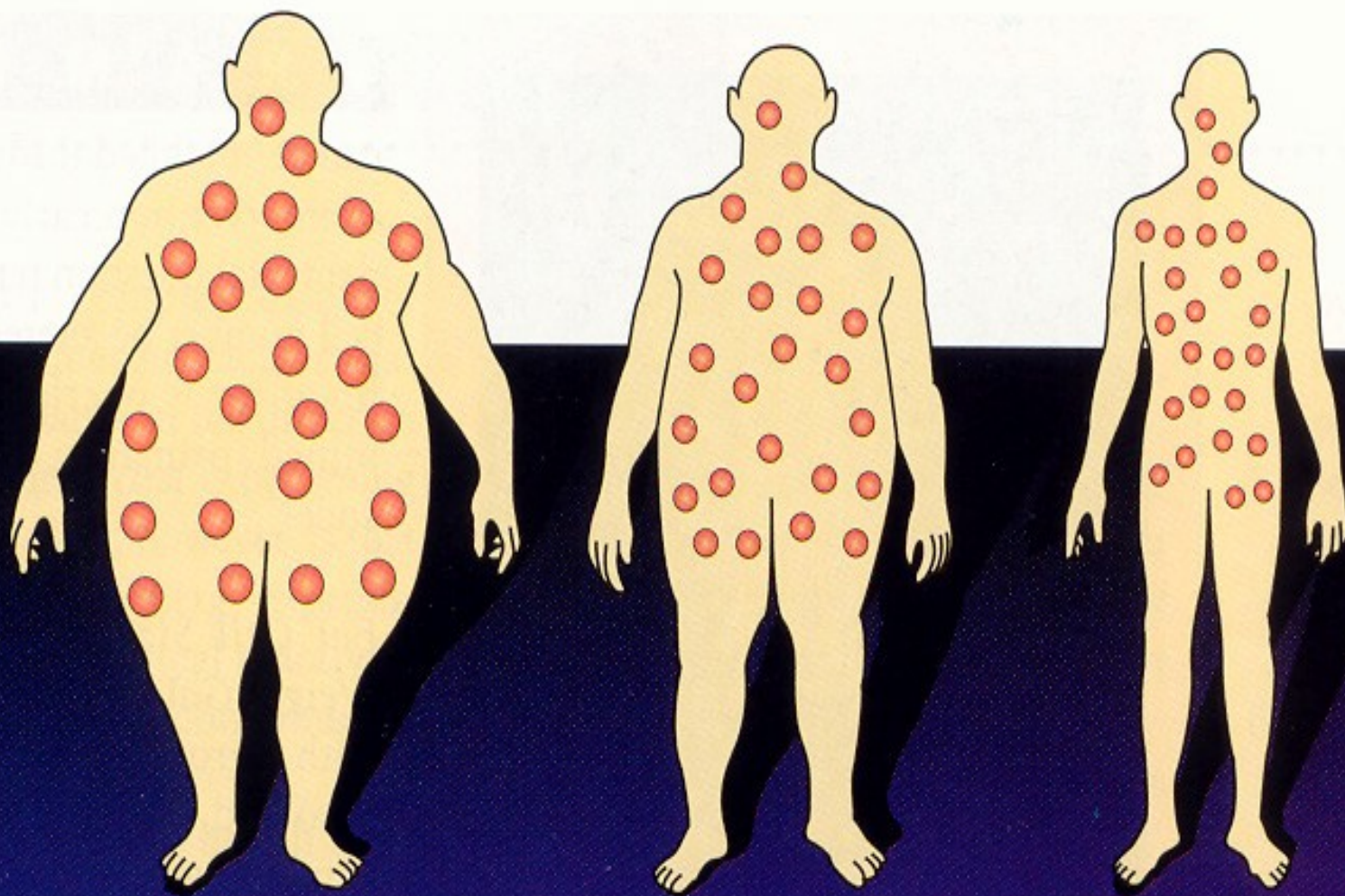


Isn't body composition genetic?

- While some aspects of your body composition are based on heredity (such as where you tend to store excess fat), for the majority of the population percent body fat is related to lifestyle. After about age 16, changes in body fat are due to changes in fat cell size not number. These cells expand (or shrink) to accommodate excess calorie storage.

Can I change my body composition?

- Yes. To increase or decrease your percent of body fat you need to create the right balance between the calories you consume and the calories you burn. The most effective way to do this is to decrease your consumption of fat and increase your activity level. Aerobic exercise is a very effective way to decrease body fat, however, you must combine strength training in order to maintain or gain muscle mass and tone.



Body mass	149 kg	103 kg	75 kg
Fat cell size	0.9 μg per cell	0.6 μg per cell	0.2 μg per cell
Fat cell number	75 billion	75 billion	75 billion

Body Fat

A faint background graphic featuring a light blue circle and a green silhouette of a person in a yoga pose, possibly a tree pose, with green lines radiating from the center.

- There are three times in life when we develop or form fat cells: during the third trimester in utero, during the first year of life, and during puberty.
- Most people have around 75 billion fat cells. Those fat cells may change size, but they will not “burn off”. So, by exercising in the “fat burning” zone, we are actually reducing the size, not the quantity of fat cells.

Measuring body fat

- Bioelectrical impedance is readily available, easy to use, and reasonably accurate
- A very low level electrical signal is sent through the body by standing on sensors on a body fat monitor. The signal travels quickly through lean tissue, which has a high percentage of water and is therefore a good conductor of electricity, and more slowly through fat, as fat has a lower percentage of water and is therefore a poor conductor of electricity. Bioelectrical Impedance devices use the information from this signal to work out body fat percentage.

Body fat testing at the Wellness Center

- Test on the Tanita scale.
- Best if you empty your bladder 30 minutes before testing and avoid:
 - alcohol for 48 hours
 - exercise for 12 hours
 - food and caffeine for 4 hours
- Test every 2-6 weeks.



Resources



Stay tuned for next week

